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DEANER

Deanol (Deaner - Riker) is one of the many drugs introduced during the past few years which are being used for the treatment of behavior problems in children and for relief of mental depression in adults. The drug, a salt of 2-dimethylaminoethanol, is reported to be converted into acetylcholine, and to produce central-nervous-system effects similar to those observed with amphetamine. Deaner is recommended by the manufacturer for the treatment of behavior problems and learning defects both in children who are otherwise normal and in those who are retarded or schizophrenic.

As with similar drugs, most of the evidence supporting the manufacturer's claims is based on uncontrolled studies. With such studies it is impossible to determine whether an observed effect is due to specific drug activity, to placebo effect, to a change in the therapeutic setting, to other concurrent therapy, or to observer bias (L. Eisenberg in Child Research in Psychopharmacology, C. C. Thomas, 1959).

CONTROLLED STUDIES - Two "controlled" double-blind studies of the use of Deaner in the treatment of behavior disorders in children have, however, been reported. One study (S. J. Geller, JAMA, 174:481, 1960) evaluated the effects of Deaner in a group of "poorly integrated," hyperactive, aggressive children who were treated as out-patients (25 children were given the drug, 25 an experimental tranquilizer, and 25 a placebo). With doses of 50 mg. of Deaner twice daily, appreciable symptomatic improvement was observed in the Deaner group, particularly in terms of "improved integrative ability," as compared with the placebo group. However, no comparison was made with amphetamine, the standard drug for treatment of behavior problems in children showing overaggressiveness and hyperactivity. A surprising feature of the study is the almost complete lack of effect of the placebo; this finding is in striking contrast with other drug studies in which many children showed improvement on placebos (L. Cytryn, et al., Am. J. Orthopsych., 30:113, 1960).

Quite different results were obtained by G. D. LaVeck and P. Buckley (J. Chronic Dis., 13:174, 1961), who studied the effects of a number of psychopharmacologic agents, including Deaner, on disturbed and mentally-retarded patients, most of them children, in an institutional setting. Deaner was given to 25 children and young adults, and a placebo to another 25, each group being

well-matched with respect to etiology of the disorder, intelligence, and age. The dosage was 75 mg. daily for 55 days, with an increase to 150 mg. daily for an additional 37 days. On the basis of both observation and a series of psychological tests, it was found that about the same number — nine with Deaner and 10 with placebo — showed behavioral improvement in both groups.

DEANER AND AMPHETAMINE - In normal adults Deaner has shown amphetamine-like effects such as mild euphoria and increased ability to concentrate. Deaner literature recommends the drug for use in severe as well as mild mental depression, but convincing evidence that it is of value in any dose range for the relief of the more severe forms of depression is lacking. In children, amphetamine has tranquilizing effects (unlike its effects in adults) and it has been used with considerable success in the treatment of hyperactivity and overaggressiveness in children. How Deaner compares in effectiveness with amphetamine in the treatment of such behavior problems cannot be determined on the basis of present evidence. In general, no psychopharmacologic drug should serve as more than an adjunct to psychotherapy in the treatment of behavior problems severe enough to require medical attention (C. Bradley, Pediatrics, 21: 325, 1958).

As with amphetamine, side reactions to Deaner include insomnia and increased irritability. Other side effects are headache and pruritus.

SURGICEL, OXYCEL AND GELFOAM

Surgicel (Johnson & Johnson) is one of the group of absorbable hemostatic agents which also includes Oxidized Cellulose, USP (Oxycel - Parke, Davis) and Absorbable Gelatin Sponge, USP (Gelfoam - Upjohn). A process which involves regeneration and oxidation of alpha cellulose derived from purified cotton linters is claimed to make this product superior to the other absorbable hemostatic agents in ease of handling and rate and completeness of absorption, as well as in hemostatic effects independent of normal clotting mechanisms.

SURGICEL - The major published studies on Surgicel are those of a single group of investigators (A. Lebendiger, et al., Surgical Forum, 10: 440, 1959; E. S. Hurwitt, et al., Am. J. Surg., 100: 439, 1960) who report that Surgicel is an effective and well-absorbed hemostat causing no untoward reactions, and useful in many surgical procedures. There are as yet no studies showing that the product is superior in hemostatic effectiveness or in completeness of absorption to Oxycel and Gelfoam, but Medical Letter consultants believe that Surgicel does have advantages in ease of handling and rapidity of absorption. Further experimental and clinical studies are, however, required for confirmation of these apparent advantages of Surgicel, and for a determination of both the completeness of its absorption in body cavities and the comparative frequency of such side effects as fibrosis, adhesions, foreign-body reaction and potentiation of infection.

OXYCEL - Oxycel, the first of the absorbable hemostats, is produced by oxidation of specially treated natural cotton, resulting in the formation of car-

boxyl groups which give the material the desired chemical and physical properties. Oxycel combines with blood, and together they exert a mechanical tamponade effect; the material also provides a scaffolding for further clotting. It is likely that these mechanical factors are the major determinants in the hemostatic properties of all absorbable agents, including Surgicel.

GELFOAM - Gelfoam is made from a sterile gelatin solution which is hardened, dried, and rendered porous. When pressed in place, it clings to the bleeding surface and takes up about 45 times its weight of blood. Its action in causing clotting is, as with all absorbable hemostatic agents, mainly mechanical, the pressure of the blood-saturated sponge having the effect of a tampon. It is completely absorbed in about three to five weeks. All three materials are useful in those occasional instances in which venous ooze during surgery is difficult to control. They are also employed on raw bleeding surfaces, and for special problems of vascular grafting. The traditional precautions associated with good surgical practice should, of course, be observed with all of these materials. It is still desirable to minimize the amount of foreign material used in wounds, and to avoid the use of any hemostatic material in grossly contaminated wounds.

ALVODINE

Piminodine ethanesulfonate (Alvodine - Winthrop) is a recent addition to the large group of analgesic-narcotics claimed to be superior to morphine. It is closely related chemically to meperidine (Demerol - Winthrop), which has been in use since 1944. The manufacturer states that Alvodine causes almost no dizziness or euphoria, and that it is relatively free of other side effects. It can be administered parenterally or orally.

PARENTERAL USE - Both published and unpublished reports studied by Medical Letter consultants leave little doubt that it is an effective analgesic, but present evidence is not sufficient to establish its superiority in freedom from side effects. In one of the few published reports, T. J. DeKornfeld and L. Lasagna (J. Chronic Dis., 12:252, 1960) found that under the conditions of their experiment, and using double-blind techniques and mean pain-relief scores, 7.5 mg. of Alvodine administered parenterally was equivalent in potency to 10 mg. of morphine.

Single subcutaneous doses of various analgesics, including Alvodine and Demerol, were compared with a placebo in a double-blind study by M. S. Sadove, et al. (Current Ther. Res., 2:61, 1960). These investigators found that all of the active drugs studied had greater analgesic and sedative effect than the placebo, but at the doses used there were no significant differences among them. The manufacturer's brochure points out that the average respiratory rate in the patients receiving Alvodine remained at 94 per cent of the control reading. Not only is respiratory rate alone a notoriously inadequate measure of pulmonary ventilation, but with the small doses used in this study (the dose of Alvodine was 5 mg.) none of the narcotics tested had — nor could be expected to have — any significant respiratory-depressing effect. In a "single-blind" study of the use of Alvodine during labor (W. R. Groeber and A. J. Ziserman, Obst. & Gyn.,

14: 743, 1959), the authors report that the average time before the onset of respiration in the newborn infant was 24 per cent more delayed after Demerol than after Alvodine, with neither of the compounds delaying the onset of respiration by more than two minutes.

ORAL USE - The manufacturer's brochure includes neither pharmacologic nor toxicologic data on the oral use of the drug. A preliminary report by D. W. Molander (Current Ther. Res., 2: 370, 1960) gives only subjective impressions of the effects of orally administered Alvodine in 28 patients with malignant conditions. The study employed none of the techniques commonly used for the objective assessment of new analgesics, and no valid conclusions can be drawn from it.

The Alvodine brochure is devoted largely to a description of experience with the drug in a "collective study" by the manufacturer's Department of Medical Research. The difficulties of arranging, controlling and impartially interpreting the case reports in such studies are so great that this type of unpublished evidence cannot be relied upon in the evaluation of a new drug.

Present evidence does not permit the assumption that Alvodine, administered parenterally, has any advantage over morphine, either in effectiveness or in relative frequency and severity of side effects. A judgment of the effectiveness of oral administration is not yet possible. Alvodine is an addicting narcotic, with no known advantage over morphine or other narcotics in addiction potential. The cost of Alvodine is about the same as that of Demerol, and both are much more expensive than morphine.

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